Author's response to reviews

Title: Outcome Measures of a 6 Minute Walk Test: Relationships with Physiologic and Computed Tomography Findings in Patients with Sarcoidosis

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Version: 4 Date: 9 March 2010

Author's response to reviews: see over
Re: MS: 1801645934294088
Outcome Measures of a 6 Minute Walk Test: Relationships with Physiologic and Computed Tomography Findings in Patients with Sarcoidosis

Dear Dr. Norton,

It is my pleasure to provide a point-by-point response to the concerns, and there are no changes have been made in the revised manuscript submitted in Dec-21-2009.

We thank you for your consideration of our manuscript.

Sincerely,

Esam Alhamad, MD
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Reviewer: Anne Holland

Dear Dr. Holland,

Thank you for your review. We are pleased to respond to your comments.

Comment 1:
My major remaining concern is that the 6-minute walk test was only performed once and thus the significant, known learning effect for this test has not been accounted for. It is therefore difficult to interpret the lack of relationship between walk distance and CT findings - it is possible that a significant relationship may have been found had the 'best' distance been recorded on a second test, particularly given the statistical trends evident in the manuscript. I am not certain that the conclusions of the manuscript, that distance-saturation product is a better measure than walk distance, can be justified.

Response:

Although a learning effect has been reported, our experience has been that repeating the test has little impact on the walking distances achieved by Arab patients. Furthermore the current guidelines recommend “a practice test is not needed in most clinical settings but should be considered” (ATS 2002;166:111-117). A recent report by Steve Salzman in Chest 2009; 135:1345-1352 indicated that “the recommendation not to include a practice test routinely in part reflects the increased time and patient burden it would entail”.

We are providing a list of several published studies were 6-minute walk test performed once:

Baughman et a Chest 2007;132:207-213
Kabitz et al. Chest 2006;130:1496-1502
Lettieri et al. Respiratory Medicine 2006;100:1734-1741
Takigawa et al. Respiratory Medicine 2007;101:561-567

Lack of relationship between walk distance and CT findings perhaps related to retrospective nature of our study, or sample size rather than the effect of performing a second test.
In regard to our conclusion we have clearly stated in the last paragraph page 14 that both 6MWD and desaturation during 6MWT are valuable tools for predicting functional capacity and mortality in various pulmonary and non-pulmonary diseases. Thus, use of the outcome measure, DSP, in conjunction with 6MWT and other tests may help with the management of patients with sarcoidosis by providing additional information about functional status.

Comment 2:

An additional query is regarding the regression model. There were a very large number of variables entered (10-11 variables) in the stepwise multiple linear regression model, given that only 59 cases were included. I think it would be worth consulting a statistician regarding whether this is appropriate. I apologize for not identifying this before.

Response:

Thank you for your query. We have consulted a statistician, in addition the second author is a clinical statistician. Table 2 in the manuscript clearly indicates high correlation with the variables tested in relation to DSP, and distance. Hence all variables were considered for stepwise regression analysis instead of selecting few variables. Recently Garin et al (The Journal of Rheumatology 2009;36:2:330-336) published a study using large number of variables in a limited number of patients. They included 11 variables in their model in two different groups. The first group with IPF=40 patients, and the second group with scleroderma= 75 patients.